ELSEVIER

Thin Solid Films 281–282 (1996) 655–657

thin solid films

# Author Index of Volumes 281–282

Abe, Y., 28
Adamik, M., 90
Akahane, T., 305
Akashi, K., 311, 321
Ando, H., 521
Ando, S., 124
Anton, R., 105
Ao, T., 194
Aoki, R., 510, 517
Aozasa, M., 533
Arai, K., 318
Arakawa, T., 466
Araujo-Osorio, J., 552
Asada, M., 162, 166
Asamaki, T., 190
Aseev, A.L., 20

Baba, H., 453
Baba, K., 324
Bangert, H., 68
Barna, P.B., 90
Bauer, W., 68
Bechstedt, F., 256
Benezech, A., 64
Bergauer, A., 68
Bernard, C., 64
Betz, G., 68
Bica de Moraes, M.A., 294
Bonnot, A.M., 260
Brazdeikis, A., 57
Broclawik, E., 598

Cabañas-Moreno, J.G., 552
Cai, X.Y., 412
Castro, S.G., 294
Colarič, B., 409
Cvelbar, A., 298

Deguchi, M., 267, 271, 275
Dekempeneer, E.H.A., 331
Demizu, Y., 372, 375
Demšar, A., 409
Den, S., 102, 149
Doi, T., 588
Dumpich, G., 368
Durrant, S.F., 294

Easterbrook, M., 108
Ebe, A., 327, 352, 356
Ebihara, K., 324
Eisenmenger-Sittner, C., 68
Endo, T., 285
Engemann, J., 143
Enokijima, T., 318

Esaka, F., 314
Esashi, M., 640

Falcony, C., 552
Flodström, A.S., 57
Friedrichowski, S., 368
Fujii, T., 460
Fujikawa, T., 318
Fujimori, Y., 453
Fujimoto, H., 507
Fujino, N., 576
Fujino, Y., 32
Fujishima, M., 348
Fujiyasu, H., 499
Fukui, S., 172, 289
Furuya, K., 314

Gondó, Y., 496
Goto, T., 412, 602
Gröger, R., 73
Gudiño-Martínez, A., 552
Gui, L., 76
Güntherodt, H.-J., 634
Guo, Q., 76
Guo, T., 379

Haefke, H., 634
Hafner, J., 492
Haga, Y., 128, 132
Hamanaka, H., 640
Hanabusa, T., 182, 340, 344
Hasegawa, M., 252
Hasegawa, T., 588
Hasegawa, Y., 556, 618
Hashima, H., 463
Hashinaga, T., 364
Hashizume, T., 556, 618
Hata, T., 209
Hatakeyama, M., 630
Hatamura, Y., 630
Hatanaka, K., 507
Hatanaka, Y., 397
Hatta, A., 264, 271, 275, 279, 282
Hatta, I., 594
Hattori, K., 644
Hayakawa, Y., 529
Hayasaki, H., 14
Hayashi, K., 542
Hayashi, S., 397
Hayashi, T., 318
Hayashi, Y., 102, 149
Heck, C., 94
Heilmann, A., 112

Hellberg, P.-E., 415
Hibino, M., 594
Hirai, M., 94, 591
Hiraki, A., 264, 271, 275, 279, 282
Hirao, T., 267, 271, 275
Hirayoshi, Y., 285
Hironaga, N., 460
Hirose, M., 179
Hirotani, A., 580
Hishita, S., 449
Honda, S., 206
Honda, Y., 613
Horita, S., 28
Horiuchi, T., 542
Hosaka, T., 360
Hoshikawa, K., 545
Hosokawa, N., 136, 155, 198
Hosoki, S., 588
Howald, L., 634
Howson, R.P., 182
Hu, C.-W., 602
Hudner, J., 415

Ichiki, K., 630
Ichimiya, A., 1, 36, 556
Ichimura, H., 314
Ichinohe, T., 610
Ide, A., 24
Iimori, T., 644
Ikegawa, S., 60
Ikeuchi, Y., 344
Ikeyama, M., 10, 529
Imai, O., 352, 356
Imamura, M., 314
Inoue, S., 182
Inoue, T., 24
Inui, Y., 302
Ishibashi, K., 198
Ishida, A., 337, 364
Ishida, T., 228
Ishihara, M., 311, 321
Ishikawa, I., 117
Isobe, S., 431
Ito, T., 264, 271, 275, 279, 282
Itoh, H., 305
Itoh, S., 334
Itoh, T., 507
Iwama, S., 235
Iwami, M., 94, 591
Iwamoto, Y., 327, 356
Iwashige, H., 36
Iwatsubo, S., 484

Iwatubo, S., 162, 166
Izumi, T., 275

Jiang, N., 279, 282
Jin, P., 232, 239

Kadota, K., 264
Kamijo, N., 243
Kamimura, K., 159
Kamioka, I., 98
Kaneko, H., 503
Kaneko, K., 311
Kaneshiro, C., 606
Kan-nari, C., 584
Karino, I., 576
Karlsson, U.O., 57
Kasahara, K., 651
Kasai, Y., 513
Kashiwagi, A., 318
Kasukabe, Y., 32
Kasuya, A., 602
Katagiri, M., 598
Kataoka, H., 348
Kataoka, M., 194
Kato, Y., 311
Katsumata, H., 252
Katsumata, S., 24
Kawabata, K., 179
Kawabe, T., 98
Kawada, T., 28
Kawahara, M., 613
Kawai, M., 120
Kawana, A., 314
Kawasaki, T., 17
Kezuka, H., 584
Kihara, H., 243
Kikuchi, T., 314
Kim, K.J., 419
Kim, S., 449
Kimata, H., 5
Kinbara, A., 84, 423
Kingetsu, T., 14
Kishida, M., 613
Kishimoto, M., 32
Kitabatake, M., 17, 267, 271, 275
Kitajima, M., 98
Kitamura, M., 576
Kizuka, T., 5
Kleiman, G.G., 294
Kobayashi, K., 545
Kobayashi, N., 252
Kobayashi, S., 289
Kobayashi, T., 412
Kobuna, S., 401

Elsevier Science S.A.

Kohno, M., 588
Kohyama, M., 202
Komiyama, M., 580
Komori, K., 644
Komuro, S., 102
Kondo, H., 285
Kondo, I., 84
Kondo, K., 84
Kondoh, M., 453
Kooi, B.J., 488
Korechika, T., 17
Korzec, D., 143
Koumoto, K., 521
Kovács, Zs., 90
Kövér, L., 90
Koyanagi, T., 460
Kramer, N., 637
Krasilnikov, A.B., 20
Kubo, M., 580, 598
Kubota, H., 108
Kurabayashi, T., 640
Kuratani, N., 327, 352, 356
Kuroda, H., 441
Kuroda, K., 562
Kusabiraki, M., 533
Kusaka, K., 182, 340
Kusaka, M., 94, 591
Kusakabe, K., 401
Kusano, E., 423
Kusche, D., 415
Kuwabara, H., 499
Kuwabara, K., 521
Kuypers, S., 331

Landers, R., 294
Latyshev, A.V., 20
Lee, D.Y., 419
Lévy, F., 52
Lievens, H., 186
Lijadi, M., 36
Lin, H., 521
Lindav, J., 409
Ling, Y., 618
Lippens, P., 186
Lodder, J.C., 474
Longueville, J.L., 260
Lorenz, R., 492
Lozada-Morales, R., 386

Madar, R., 64
Maeda, N., 427
Magara, H., 228
Makabe, R., 457
Makita, H., 279
Makita, Y., 252
Margaritondo, G., 90
Marumoto, Y., 591
Masai, J., 624
Masaki, S., 289
Masuda, A., 568
Matsubara, K., 460
Matsubayashi, N., 314
Matsue, T., 344
Matsumura, Y., 503
Matsushige, K., 542
Meneve, J., 331
Messier, R., 52
Migita, S., 510, 517
Mihara, T., 228, 457
Miki, T., 235
Mikitisin, P., 368
Milošev, I., 298
Mima, H., 393
Minami, K., 640
Mittemeijer, E.J., 488
Miura, N., 562
Miura, R., 598
Miura, T., 190
Miwa, S., 466
Miyagawa, S., 10, 529
Miyagawa, Y., 10, 529
Miyake, E., 412
Miyake, K., 431
Miyake, S., 356
Miyamoto, A., 580, 598
Miyanaga, Y., 584
Miyata, N., 218
Miyazaki, H., 436
Miyazaki, S., 337, 364
Miyazawa, W., 149
Miyoshi, T., 128
Mizushima, K., 334
Mizutani, W., 548
Mochizuki, S., 228, 457
Møller, P.J., 76
Moon, D.W., 419
Mori, I., 194
Mori, Y., 271, 275, 282
Mori, Z., 510, 517
Morikawa, H., 202
Morikawa, T., 102
Morisaki, H., 289, 610
Morita, S., 536
Moriya, M., 412
Motoi, Y., 60
Motomatsu, M., 548
Moulin, S., 260
Mukai, M., 453
Müller, A.-D., 112
Müller, F., 112
Murai, A., 146
Murakami, Y., 352
Mutoh, H., 102

Nagahara, L.A., 647
Nagamura, T., 591
Nagata, H., 348
Nagata, M., 108
Nagata, S., 32
Nakaaki, I., 302, 308
Nakagawa, Y., 169
Nakagiri, N., 572
Nakahara, H., 1
Nakajima, S., 463
Nakamura, K.G., 98
Nakamura, T., 499
Nakamura, Y., 275
Nakanishi, Y., 499
Nakao, M., 630
Nakao, S., 10, 529
Nakase, K., 152
Nakashima, H., 383
Nakata, T., 591
Nakazono, T., 324
Naoe, M., 162, 166, 484
Natori, A., 39
Navarro, H., 552
Navinšek, B., 298
Nicolet, M.A., 108
Nie, H.-Y., 548
Nishiguchi, A., 348
Nishijima, A., 314
Nishikawa, K., 14
Nishimura, K., 279
Nishina, Y., 602
Nishiyama, S., 327, 352, 356
Nittono, O., 124, 128, 132
Niwa, H., 10
Noritake, C., 84
Nosaka, T., 390, 393
Nozaki, S., 289, 610

Odani, T., 401
Offermann, J., 105
Ogasawara, H., 120
Ogata, K., 327, 352, 356
Ogata, S., 175
Ogawa, S., 172, 390, 393, 463
Ogawa, Y., 624
Ogino, T., 618
Ohlsén, H., 415
Ohno, T., 556
Ohsaki, H., 213, 223
Ohtani, K., 243
Ohya, I., 146
Ohyama, R., 218
Oi, R., 460
Okada, O., 155
Okamoto, A., 172, 390, 393
O'Keeffe, P., 102
Okimura, K., 427
Okumura, T., 606
Ono, T., 640
Onuma, Y., 159
Oohira, T., 513
Ootubo, J., 32
Orel, B., 409
Orita, K., 542
Oshita, M., 499
Ota, H., 510, 517
Ota, M., 651
Oumori, M., 576
Oura, K., 206
Oyama, T., 213
Ozawa, T., 591

Panjan, P., 298
Park, J.i., 228
Park, K.S., 419
Pons, M., 64
Praček, B., 409

Radi, Zs., 90
Rouch, H., 64
Rus, S., 409

Saito, N., 302, 308
Saitoh, K., 10, 529
Saka, H., 562
Sakai, K., 510, 517
Sakai, S., 513
Sakakima, H., 271
Sakamoto, K., 602
Sakamoto, M., 651
Sakamoto, Y., 149
Sakata, I., 108
Sakata, T., 556, 618
Sakuma, T., 120
Sakurai, T., 556, 618
Samukawa, S., 169
Sanjinés, R., 90
Sano, K., 397
Sasaki, K., 209
Sasaki, M., 155
Sasaki, N., 46, 175
Sasaki, T., 282, 334
Sasase, M., 431
Sato, K., 624
Sato, M., 337
Sato, S., 445
Sato, T., 314
Sato, Y., 445
Satoh, M., 24
Schmidt, A.A., 105
Schmidt, W.G., 256
Scholze, A., 256
Schönenberger, C., 637
Seki, T., 43
Sekiguchi, A., 155
Senda, K., 536
Seo, W.S., 521
Serikawa, T., 246
Setsuhara, Y., 356
Shibata, A., 427
Shibata, H., 252
Shibata, T., 152
Shibata-Seki, T., 624
Shigesato, Y., 436
Shimada, H., 314
Shimizu, J., 213
Shimizu, K., 513
Shimizu, S., 46, 175
Shimizu, T., 568
Shimizu, Y., 401
Shin, S.H., 228
Shinjo, T., 469
Shinohara, H., 613, 618
Shinohara, K., 169
Shiota, K., 598
Shirai, S., 246
Show, Y., 275
Smeets, J., 331
Somers, M.A.J., 488
Stirling, A., 598
Suda, Y., 324
Suezawa, Y., 496
Sugimura, H., 572
Sumi, A., 594
Sumi, H., 202
Suto, S., 602
Suzuki, H., 264
Suzuki, M., 43
Suzuki, T., 218, 318
Suzuki, Y., 243, 390, 393, 463
Švegelj, F., 409

Tabata, O., 228
Tachibana, Y., 213

Tada, H., 404
Tada, S., 149
Tahara, H., 146, 152
Takagi, T., 507
Takahashi, E., 327, 356
Takahashi, H., 348
Takahashi, I., 412
Takahashi, T., 162, 166, 484
Takano, I., 431
Takatoh, S., 318
Takeda, S., 32, 539
Takei, A., 337
Takenaka, O., 84
Tamura, S., 228, 243
Tanaka, A., 39
Tanaka, M., 404, 441, 453
Tanaka, N., 5, 613
Tanaka, S., 630
Tanaka, T., 179, 372, 375
Tanaka, Y., 1
Tanemura, S., 10, 232, 235, 239
Tanigaki, N., 80
Tasaka, Y., 441, 453
Tatsumi, M., 507
Tatsuoka, H., 499
Tazawa, K., 580
Tazawa, M., 232, 529
Terashima, K., 634
Tobe, R., 155
Togashi, F., 545
Toki, K., 401
Tokumoto, H., 548, 647
Tokunaga, K., 318
Tokunaga, M., 108
Tomimatsu, S., 588
Tominaga, K., 182, 194, 340
Toyoshima, K., 285
Traub, K., 143
Tsubouchi, T., 598
Tsuchiya, T., 321
Tsuji, S., 562
Tsujimichi, K., 580
Tsujimoto, K., 562
Tsukada, T., 169
Tsukajima, J., 318
Tsukakoshi, M., 120
Tsukamoto, T., 591
Tsutsui, N., 562

Uchida, H., 503
Uchida, H.-H., 503
Uchida, T., 536
Ueda, T., 194
Uekusa, S., 252
Ueno, T., 172
Ueyama, H., 169
Uozumi, K., 383
Usami, K., 412
Usami, S., 318, 441, 453
Utsuno, F., 436

van den Berg, M.R., 637
Vázquez-López, C., 552
Vidal, M.A., 552
Vinogradov, G.K., 536
von Blanckenhagen, P., 73

Wada, M., 503
Wakiyama, S., 576
Wang, C.M., 249
Watabe, K., 198
Watamori, M., 206
Watanabe, M., 507
Watanabe, M.O., 334
Watanabe, T., 545
Wawro, A., 602
Werner, F., 143
Wickramanayaka, S., 397
Wiemer, C., 52
Won, J., 282
Wu, J.L., 249
Wu, Q.D., 249

Xi, Z., 584
Xia, Z.J., 249
Xue, Q., 556, 618

Yagyu, H., 271
Yamada, Y., 32
Yamaguchi, S., 32
Yamaguchi, T., 302, 372, 375
Yamaki, T., 431
Yamamoto, M., 14
Yamamoto, Y., 24, 372, 375
Yamano, H., 598
Yanagawa, H., 624
Yase, K., 80, 525
Yasui, I., 436
Yasui, K., 305
Yasui, T., 146, 152
Yasunaga, H., 39
Yasutake, M., 576
Yikegaki, T., 318
Yokomichi, H., 568
Yokota, K., 507
Yokota, Y., 94
Yonekubo, S., 159
Yonezawa, Y., 568
Yoshida, A., 372, 375
Yoshida, Y., 80, 525
Yoshikawa, T., 146, 152
Yoshimura, K., 235
Yoshitake, M., 390, 393
Yumoto, H., 311, 321

Zahirul Alam, A.H.M., 209
Zalar, A., 298, 409
Zelaya-Angel, O., 386
Zou, Y.H., 249

ELSEVIER

Thin Solid Films 281–282 (1996) 659–669

thin solid films

# Subject Index of Volumes 281–282

Acetylene
plasma polymerized acetylene thin film by pulsed discharge, 536
Adhesion
improvement of the adhesion to polyimide substrates of copper films prepared by an ion beam and vapor deposition (IVD) method, 356
adhesion fracture of a two-layer Au evaporated film with C, W and Cr mixed, 360
Adsorption
selective gas detection by means of surface plasmon resonance sensors, 466
AES
reconstruction of heat treated 6H-SiC(0001) surfaces: AES, STM, 591
Alkali antimonide
novel GaAs photocathodes with alkali antimonide intermediate layers and caesium–oxygen adlayers, 379
Alkali halides
heteroepitaxy of KCl on KBr substrate, 39
Alloys
Monte Carlo simulation of the variation of a binary alloy film composition due to intrinsic resputtering using different working gases, 68
martensitic transformations in sputter-deposited Ti–Ni–Cu shape memory alloy thin films, 364
(Cd,Zn)S thin films prepared by chemical bath deposition for photovoltaic devices, 375
Aluminium
phase transitions in ultrathin Al films on Si(111) surfaces, 73
difference of Si nodules precipitating from Al–$X$ wt.% Si ($X=0.5\sim3.3$), 84
the enhancement of plasma confining effect at low gas pressure in the sputtering apparatus with floating potential cathode, 162
effects of magnet behind the target on discharge and sputtering characteristics in the sputtering apparatus, 166
Aluminium nitride
effect of bias voltage on AlN thin films prepared by electron shower method, 321
effect of nitrogen gas pressure on residual stress in AlN films deposited by the planar magnetron sputtering system, 340
Aluminium oxide
energy-selective electron cyclotron resonance plasma for controlled surface reaction processes, 102
in-depth concentration profile equation for cations in thin oxide film under the inverse logarithmic growth law of low-temperature oxidation, 117
Amorphous
characterization of niobium oxide electrochromic thin films prepared by reactive d.c. magnetron sputtering, 235
Amorphous materials
requirements for sputtering magnetic alloys on organic film, 186
the effects of Tl impurities on the properties of amorphous SiC:H films prepared by co-sputtering, 302
electrical, optical and structural properties of a-SiNGe:H films prepared by the r.f. glow-discharged decomposition, 308
tribological properties of r.f. PACVD amorphous B–N–C coatings, 331
investigation of thin-film transistors using a combination of focused ion beam etching and cross-sectional transmission electron microscopy observation, 562
Annealing
difference of Si nodules precipitating from Al–$X$ wt.% Si ($X=0.5\sim3.3$), 84
Atomic and molecular beam studies
transition metal oxide films prepared by pulsed laser deposition for atomic beam detection, 453
oxidation of Zn films by irradiation with an excited metastable He beam, 460
new fast atom beam processing with separated masks for fabricating multiple microstructures, 630
Atomic force microscopy
an atomic force microscopy study of thin copper oxide films grown by molecular beam epitaxy on MgO(100), 57
direct observation of the crystallization in EL organic thin films by total reflection X-ray diffractometer, 542
electrochemical nanolithography using scanning probe microscopy: fabrication of patterned metal structures on silicon substrates, 572
instrumentation of a wafer inspection large sample atomic force microscope, 576
Atomic force microscopy (AFM)
effect of bias voltage on AlN thin films prepared by electron shower method, 321
simulation of atomic force microscopy image variations due to tip apex size: appearance of half spots, 580
Auger electron spectroscopy
effects of r.f. bias on cubic BN film synthesis by pulsed Nd:YAG laser deposition, 324
FTIR spectroscopy and AES study of water containment in $SiO_2$ thin films, 409
growth kinetics of thin oxide layers; oxidation of Fe and Fe–N phases at room temperature, 488

Behenic acid
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
Benzene
molecular dynamics simulation of traction fluid molecules under EHL condition, 598
Bismuth
the influence of Bi-sticking coefficient in the growth of Bi(2212) thin film by ion beam sputtering, 510
Bi-superconducting thin film
comparison between Bi-superconductor thin films fabricated via co-deposition and layer-by-layer deposition by ion beam sputtering method, 517
Boron
electrical properties of boron-doped diamond films prepared by microwave plasma chemical vapour deposition, 267

Elsevier Science S.A.

Boron nitride
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305
effects of r.f. bias on cubic BN film synthesis by pulsed Nd:YAG laser deposition, 324
boron nitride hard coatings by ion beam and vapor deposition, 327

Cadmium sulphide
(Cd,Zn)S thin films prepared by chemical bath deposition for photovoltaic devices, 375
photoluminescence analysis of CdS thin films under phase transition, 386
Caesium–oxygen
novel GaAs photocathodes with alkali antimonide intermediate layers and caesium–oxygen adlayers, 379
$CaF_2$ substrate
microstructure of germanium films crystallized by high energy ion irradiation, 10
Carbon
in situ observation of the in-plane structure of C60 thin films on metal substrates prepared by molecular beam deposition, 80
in situ optical characterization of carbon layers formed in the initial stages of diamond growth, 260
carbon nitride thin films deposited by the reactive ion beam sputtering technique, 289
initial stage of $C_{60}$ film growth and reaction on Si(111)7×7 and graphite surfaces studied by HREELS–STM, 602
micromachine-actuator rotated by rarefied gas effects, 651
Catalysis
surface properties of $SiO_x$ monolayer photochemically formed on oxide semiconductors, 404
Cathodes
the enhancement of plasma confining effect at low gas pressure in the sputtering apparatus with floating potential cathode, 162
effects of magnet behind the target on discharge and sputtering characteristics in the sputtering apparatus, 166
$CeO_2$
surface structure of single-crystal $CeO_2$ layers grown on Si, 24
Cerium
growth of $CeO_2$ thin films by metal–organic molecular beam epitaxy, 60
Charging
negative resistance characteristics and memory phenomena in electroformed planar metal films, 383
Chemical state
chemical state analysis of surface and interface segregates in coevaporated Al–Sn–O systems, 90
Chemical vapour deposition
large area deposition: Sputtering- and PCVD-systems and techniques for LCD, 136
thermoelectric power of polycrystalline Si films prepared by microwave plasma chemical vapour deposition, 159
diamond film growth by pulse-modulated magnetoactive microwave plasma chemical vapour deposition, 264
electrical properties of boron-doped diamond films prepared by microwave plasma chemical vapour deposition, 267
ion implantation in predoped CVD diamond, 271
formation of paramagnetic defects in CVD diamond films (ESR study), 275
ultrahigh particle density seeding with nanocrystal diamond particles, 279
electrical, optical and structural properties of a-SiNGe:H films prepared by the r.f. glow-discharged decomposition, 308
high quality $SiO_2$ depositions from TEOS by ECR plasma, 397
production of a bridge structure using diamond film, 545
Chemical vapour deposition (CVD)
thermodynamic equilibrium and mass transport coupled modelling of the chemical vapour deposition process, 64
generation of large-area disk-shaped ECR plasma for diamond deposition, 146
plasma-enhanced CVD of TiN and Ti using low-pressure and high-density helicon plasma, 155
highly conductive transparent F-doped tin oxide films were prepared by photo-CVD and thermal-CVD, 228
study of diamond synthesized by simple hot-filament-assisted CVD in various conditions, 285
fluorine-containing amorphous hydrogenated carbon films, 294
electron energy loss fine structure measurements of silicon nitride films, 318
c-axis-oriented $PbTiO_3$ thin films prepared by sputter-assisted plasma CVD, 457
nanoscale Al patterning on an STM-manipulated Si surface, 640
Chromium
thin film silicon compound growth mechanisms: $CrSi_2$/Si(001), 94
Clusters
structure and growth features of tungsten clusters deposited on MgO(001) surfaces, 5
Coatings
Langmuir probe evaluation of ion bombardment during Ti–N growth by unbalanced magnetron sputtering, 52
requirements for sputtering magnetic alloys on organic film, 186
oxidation of TiN, ZrN, TiZrN, CrN, TiCrN and TiN/CrN multilayer hard coatings reactively sputtered at low temperature, 298
tribological properties of r.f. PACVD amorphous B–N–C coatings, 331
deposition of $SiO_2$ and $Ta_2O_5$ films by electron-beam-excited plasma ion plating, 401
Cobalt
epitaxy of Co/Cu and Cu/Co bilayers on MgO(111), 14
Cobalt oxide
transition metal oxide films prepared by pulsed laser deposition for atomic beam detection, 453
Co-deposition
comparison between Bi-superconductor thin films fabricated via co-deposition and layer-by-layer deposition by ion beam sputtering method, 517
Computer simulation
thermodynamic equilibrium and mass transport coupled modelling of the chemical vapour deposition process, 64
molecular dynamics simulation of traction fluid molecules under EHL condition, 598
Conductivity
negative resistance characteristics and memory phenomena in electro-formed planar metal films, 383
Copper
epitaxy of Co/Cu and Cu/Co bilayers on MgO(111), 14
Monte Carlo simulation of the variation of a binary alloy film composition due to intrinsic resputtering using different working gases, 68
ultrathin film of Cu on α-$Fe_2O_3$(0001), 76
transparent, conductive CuI films prepared by rf-dc coupled magnetron sputtering, 179
improvement of the adhesion to polyimide substrates of copper films prepared by an ion beam and vapor deposition (IVD) method, 356
Crystallization
crystal growth of ITO films prepared by DC magnetron sputtering on C film, 202
surface morphology of $TiO_x$ films prepared by an ion-beam-assisted reactive deposition method, 431
direct observation of the crystallization in EL organic thin films by total reflection X-ray diffractometer, 542

Crystallized
characterization of niobium oxide electrochromic thin films prepared by reactive d.c. magnetron sputtering, 235
$CuIn(S_xSe_{1-x})_2$
fabrication and characterization of $CuIn(S_xSe_{1-x})_2$ thin films deposited by r.f. sputtering, 372
CuO thin films
an atomic force microscopy study of thin copper oxide films grown by molecular beam epitaxy on MgO(100), 57
Cyclotron resonance studies
a rectangular large ECR plasma source, 149
sheet-shaped ECR plasma generation using permanent magnets for material processing, 152

Density functional calculations
diamond (111) and (100) surface reconstructions, 256
Deposition process
Monte Carlo simulation of the variation of a binary alloy film composition due to intrinsic resputtering using different working gases, 68
in situ observation of the in-plane structure of C60 thin films on metal substrates prepared by molecular beam deposition, 80
difference of Si nodules precipitating from Al–*X* wt.% Si ($X=0.5\sim3.3$), 84
model for oxidation of TiN in ion-beam-assisted deposition process, 108
sheet-shaped ECR plasma generation using permanent magnets for material processing, 152
large area deposition of ITO films by cluster type sputtering system, 198
modelling of lift-off sputter deposition and application to fabrication of a microlens, 246
carbon nitride thin films deposited by the reactive ion beam sputtering technique, 289
(Cd,Zn)S thin films prepared by chemical bath deposition for photovoltaic devices, 375
FTIR spectroscopy and AES study of water containment in $SiO_2$ thin films, 409
investigation of the effects of pumping speed and $Ar/O_2$ ratio on the transient time at mode transition in Ti–$O_2$ reactive sputtering, 423
growing $BaTiO_3$ thin films on Si(100) with MgO-buffer layers by sputtering, 449
magnetic thin films for high-density recording, 474
high-resolution electron microscopy of $Gd@C_{82}$ metal fullerenes grown on MgO(001) surfaces, 613
Diamond
generation of large-area disk-shaped ECR plasma for diamond deposition, 146
diamond (111) and (100) surface reconstructions, 256
in situ optical characterization of carbon layers formed in the initial stages of diamond growth, 260
diamond film growth by pulse-modulated magnetoactive microwave plasma chemical vapour deposition, 264
electrical properties of boron-doped diamond films prepared by microwave plasma chemical vapour deposition, 267
ion implantation in predoped CVD diamond, 271
formation of paramagnetic defects in CVD diamond films (ESR study), 275
ultrahigh particle density seeding with nanocrystal diamond particles, 279
electron microscopic analysis of chemical-vapour-deposited diamond surface by a novel method, 282
study of diamond synthesized by simple hot-filament-assisted CVD in various conditions, 285
production of a bridge structure using diamond film, 545
Dielectric properties
tantalum oxide films on silicon grown by tantalum evaporation in atomic oxygen, 415
growth and characterization of $Ta_2O_5$ thin films on Si by ion beam sputter deposition, 419
growing $BaTiO_3$ thin films on Si(100) with MgO-buffer layers by sputtering, 449
Dielectrics
high quality $SiO_2$ depositions from TEOS by ECR plasma, 397
tantalum oxide films on silicon grown by tantalum evaporation in atomic oxygen, 415
c-axis-oriented $PbTiO_3$ thin films prepared by sputter-assisted plasma CVD, 457
Differential reflectivity
in situ optical characterization of carbon layers formed in the initial stages of diamond growth, 260
Diffusion
in-depth concentration profile equation for cations in thin oxide film under the inverse logarithmic growth law of low-temperature oxidation, 117

Electrical properties and measurements
thermoelectric power of polycrystalline Si films prepared by microwave plasma chemical vapour deposition, 159
the effects of oxygen content on electrical and optical properties of indium tin oxide films fabricated by reactive sputtering, 206
DC reactive sputtering of electro-conductive transparent tin suboxide using a Sn–$O_2$/Ar system, 223
electrical properties of boron-doped diamond films prepared by microwave plasma chemical vapour deposition, 267
formation of paramagnetic defects in CVD diamond films (ESR study), 275
electrical, optical and structural properties of a-SiNGe:H films prepared by the r.f. glow-discharged decomposition, 308
structural and electrical characterization of $BC_2N$ thin films, 334
Electron diffraction
structure and growth features of tungsten clusters deposited on MgO(001) surfaces, 5
phase transitions in ultrathin Al films on Si(111) surfaces, 73
Electron emission
thin Si oxide films for MIS tunnel emitter by hollow cathode enhanced plasma oxidation, 412
Electron energy loss spectroscopy
electron energy loss fine structure measurements of silicon nitride films, 318
Electron energy loss spectroscopy (EELS)
initial stage of $C_{60}$ film growth and reaction on Si(111)7×7 and graphite surfaces studied by HREELS–STM, 602
Electron microscopy
high-resolution electron microscopy of $Gd@C_{82}$ metal fullerenes grown on MgO(001) surfaces, 613
Electron spin resonance
formation of paramagnetic defects in CVD diamond films (ESR study), 275
Electron transport
electron transport in percolating gold films, 368
Ellipsometry
initial plasma oxidation kinetics of silicon: DC bias effects, 98
Epitaxial growth
in situ reflection electron microscope observation of two-dimensional nucleation on Si(111) during epitaxial growth, 20
epitaxial growth of silver on an Si(111) $\sqrt{3}\times\sqrt{3}$ Au surface at room temperature, 36
Epitaxy
structural study of epitaxial growth on silicon surfaces, 1
epitaxy of Co/Cu and Cu/Co bilayers on MgO(111), 14

epitaxy of titanium nitride thin films grown by nitrogen implantation, 32
crystalline quality of α-Fe films on Si(111) and Ge(111) substrates grown by direct ion beam deposition, 46
thin film growth using a high-current, mass-separated low energy ion beam deposition system, 175
preparation and some properties of nitrogen-mixed ZnO thin films, 445
growing $BaTiO_3$ thin films on Si(100) with MgO-buffer layers by sputtering, 449
growth of MnSb and $Mn_2Sb$ epitaxial layers on GaAs substrates by hot-wall epitaxy, 499
Etching
electron microscopic analysis of chemical-vapour-deposited diamond surface by a novel method, 282
digital laser etching of Bi–Sr–Ca–Cu–O superconducting thin films, 513
production of a bridge structure using diamond film, 545
investigation of thin-film transistors using a combination of focused ion beam etching and cross-sectional transmission electron microscopy observation, 562
nanofabrication on n-GaAs surface using a scanning tunnelling microscope in a Ni-salt solution, 606
new fast atom beam processing with separated masks for fabricating multiple microstructures, 630
Ethanol
selective gas detection by means of surface plasmon resonance sensors, 466
Evaporation
physical properties of evaporated molybdenum oxide films, 218
adhesion fracture of a two-layer Au evaporated film with C, W and Cr mixed, 360
tantalum oxide films on silicon grown by tantalum evaporation in atomic oxygen, 415
preparation of $PbTiO_3$ thin films by ion-beam sputtering, 463
magnetic thin films for high-density recording, 474

Facing target system
ITO films prepared by facing target sputtering system, 194
Fatty acid
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
Fluorescence
development of a near-field optical system for investigating thin organic films, 647
Fluorine
new plasma source with an UHF (500 MHz) antenna, 169
Fourier transform infrared spectroscopy
FTIR spectroscopy and AES study of water containment in $SiO_2$ thin films, 409
Fourier transform infrared spectroscopy (FTIR)
effects of r.f. bias on cubic BN film synthesis by pulsed Nd:YAG laser deposition, 324
Friction force microscopy
friction-force microscopy of peptide filament: an application to estimate the size of a supramolecular unit, 624
Fullerenes
high-resolution electron microscopy of $Gd@C_{82}$ metal fullerenes grown on MgO(001) surfaces, 613

GaAs
novel GaAs photocathodes with alkali antimonide intermediate layers and caesium–oxygen adlayers, 379
Gallium arsenide
surface geometry of MBE-grown GaAs(001) surface phases, 556
nanofabrication on n-GaAs surface using a scanning tunnelling microscope in a Ni-salt solution, 606
C60 single crystal films on GaAs(001) surfaces, 618
Gas-permeable Au electrode
time dependence of current of plasma polymerized polystyrene thin film upon exposure to $NO_2$ gas, 539
Ge films
microstructure of germanium films crystallized by high energy ion irradiation, 10
Germanium
crystalline quality of α-Fe films on Si(111) and Ge(111) substrates grown by direct ion beam deposition, 46
thermodynamic equilibrium and mass transport coupled modelling of the chemical vapour deposition process, 64
Glow discharge
the enhancement of plasma confining effect at low gas pressure in the sputtering apparatus with floating potential cathode, 162
effects of magnet behind the target on discharge and sputtering characteristics in the sputtering apparatus, 166
a theory on planar magnetron discharge, 190
investigation of the effects of pumping speed and $Ar/O_2$ ratio on the transient time at mode transition in Ti–$O_2$ reactive sputtering, 423
development of a mesoscale/nanoscale plasma generator, 634
Glow discharge optical spectroscopy
diamond film growth by pulse-modulated magnetoactive microwave plasma chemical vapour deposition, 264
Gold
adhesion fracture of a two-layer Au evaporated film with C, W and Cr mixed, 360
electron transport in percolating gold films, 368
structure of gold-hydrocarbon composite thin films deposited using low-voltage plasma sputtering method, 390
surface structure of a fluorinated thiol on Au(111) by scanning force microscopy, 548
electrochemical nanolithography using scanning probe microscopy: fabrication of patterned metal structures on silicon substrates, 572
Growth
ultrathin film of Cu on α-$Fe_2O_3$(0001), 76
C60 single crystal films on GaAs(001) surfaces, 618
Growth mechanism
heteroepitaxy of KCl on KBr substrate, 39
plasma polymerized acetylene thin film by pulsed discharge, 536

Hardness
tribological properties of r.f. PACVD amorphous B–N–C coatings, 331
Heteroepitaxial growth
heteroepitaxial growth of InSb(111) on Si(111), 17
heteroepitaxial growth of yttria-stabilized zirconia film on oxidized silicon by reactive sputtering, 28
Hetero-epitaxy
thin film silicon compound growth mechanisms: $CrSi_2$/Si(001), 94
Heterostructures
heteroepitaxy of KCl on KBr substrate, 39
growth of MnSb and $Mn_2Sb$ epitaxial layers on GaAs substrates by hot-wall epitaxy, 499
High energy electron diffraction (RHEED)
structural study of epitaxial growth on silicon surfaces, 1
oxygen adsorption and desorption induced surface phase transition of $SrCuO_2$(001), 120
comments on the interdiffusivities evaluated by the decay rate of the satellite peak measured by X-ray diffraction, 124
High resolution electron microscopy
structure and growth features of tungsten clusters deposited on MgO(001) surfaces, 5
6H-SiC
reconstruction of heat treated 6H-SiC(0001) surfaces: AES, STM, 591
Hydrocarbons
structure of gold-hydrocarbon composite thin films deposited using low-voltage plasma sputtering method, 390

Hydrogen
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305

Impurities
the effects of Tl impurities on the properties of amorphous SiC:H films prepared by co-sputtering, 302
Indium
electron-beam-induced oxidation of indium particles embedded in a plasma polymer thin film matrix, 112
Indium oxide
large area deposition of ITO films by cluster type sputtering system, 198
crystal growth of ITO films prepared by DC magnetron sputtering on C film, 202
Indium tin oxide film
ITO films prepared by facing target sputtering system, 194
InSb
heteroepitaxial growth of InSb(111) on Si(111), 17
Interfaces
highly adhesive TiN thin films prepared on glass by the electron shower method, 311
growth and characterization of $Ta_2O_5$ thin films on Si by ion beam sputter deposition, 419
Internal stress
TiN films prepared by unbalanced planar magnetron sputtering under control of photoemission of Ti, 182
study on the internal stress in nickel films deposited onto silicon substrates by ion beam and vapor deposition (IVD), 352
Ion beam and vapour deposition
study on the internal stress in nickel films deposited onto silicon substrates by ion beam and vapor deposition (IVD), 352
improvement of the adhesion to polyimide substrates of copper films prepared by an ion beam and vapor deposition (IVD) method, 356
Ion beam irradiation
microstructure of germanium films crystallized by high energy ion irradiation, 10
Ion beam sputter
comparison between Bi-superconductor thin films fabricated via co-deposition and layer-by-layer deposition by ion beam sputtering method, 517
Ion bombardment
Langmuir probe evaluation of ion bombardment during Ti–N growth by unbalanced magnetron sputtering, 52
excited oxygen beam by R.F. type multicapillary ion source, 172
thin film growth using a high-current, mass-separated low energy ion beam deposition system, 175
boron nitride hard coatings by ion beam and vapor deposition, 327
growth and characterization of $Ta_2O_5$ thin films on Si by ion beam sputter deposition, 419
surface morphology of $TiO_x$ films prepared by an ion-beam-assisted reactive deposition method, 431
magnetic and structural properties of Fe films deposited by ion-beam sputtering with a high-energy assisted process, 484
$Xe^+$-beam sputtered $YBa_2Cu_3O_X$ thin films on Si wafers, 507
investigation of thin-film transistors using a combination of focused ion beam etching and cross-sectional transmission electron microscopy observation, 562
Ion implantation
synthesis of β-$FeSi_2$ for optical applications by Fe triple-energy ion implantation into Si(100) and Si(111) substrates, 252
ion implantation in predoped CVD diamond, 271
changes in surface morphology and optical properties of polymers induced by ion implantation, 529
production of a bridge structure using diamond film, 545
Ion plating
deposition of $SiO_2$ and $Ta_2O_5$ films by electron-beam-excited plasma ion plating, 401
Iron
crystalline quality of α-Fe films on Si(111) and Ge(111) substrates grown by direct ion beam deposition, 46
columnar structures in Fe-based metallic multilayers prepared with the facing-target-type DC sputtering method, 132
thin film growth using a high-current, mass-separated low energy ion beam deposition system, 175
magnetic and structural properties of Fe films deposited by ion-beam sputtering with a high-energy assisted process, 484
growth kinetics of thin oxide layers; oxidation of Fe and Fe–N phases at room temperature, 488
preparation of films of (Tb,Dy)$Fe_2$ giant magnetostrictive alloy by ion beam sputtering process and their characterization, 503
Iron oxide
ultrathin film of Cu on α-$Fe_2O_3$(0001), 76
ITO
ITO films prepared by facing target sputtering system, 194

Knudsen-cell
quantitative estimation of organic molecular beams by using quadrupole mass spectroscopy, 525

Laser ablation
velocity analysis of ablated particles in pulsed laser deposition of NiO film, 441
transition metal oxide films prepared by pulsed laser deposition for atomic beam detection, 453
Laser irradiation
micromachine-actuator rotated by rarefied gas effects, 651
Layer-by-layer deposition
comparison between Bi-superconductor thin films fabricated via co-deposition and layer-by-layer deposition by ion beam sputtering method, 517
Lead
impurity doping during $Pb_{1-x}Sn_xSe/CaF_2$ epitaxial growth, 43
Monte Carlo simulation of the variation of a binary alloy film composition due to intrinsic resputtering using different working gases, 68
preparation of $PbTiO_3$ thin films by ion-beam sputtering, 463
development of UHV-STM/STS at 2 K, 644
Low-index single-crystal surfaces
diamond (111) and (100) surface reconstructions, 256
Luminescence
photoluminescence analysis of CdS thin films under phase transition, 386
direct observation of the crystallization in EL organic thin films by total reflection X-ray diffractometer, 542
microstructure of spark-processed blue luminescent CdTe, GaSb, and InSb, 552

Magnesium oxide
high-resolution electron microscopy of $Gd@C_{82}$ metal fullerenes grown on MgO(001) surfaces, 613
Magnetic anisotropy
metastable spin-states and magnetic anisotropies of thin fcc Fe-layers on Cu(100), 492
Magnetic properties and measurements
a rectangular large ECR plasma source, 149
requirements for sputtering magnetic alloys on organic film, 186
magnetic structure and magnetoresistance of metallic multilayers, 469
magnetic and structural properties of Fe films deposited by ion-beam sputtering with a high-energy assisted process, 484

magnetoresistance and magnetic properties of ferromagnetic multilayers, 496
preparation of films of (Tb,Dy)$Fe_2$ giant magnetostrictive alloy by ion beam sputtering process and their characterization, 503
Magnetic structures
magnetic structure and magnetoresistance of metallic multilayers, 469
magnetic thin films for high-density recording, 474
magnetoresistance and magnetic properties of ferromagnetic multilayers, 496
Manganese
growth of MnSb and $Mn_2Sb$ epitaxial layers on GaAs substrates by hot-wall epitaxy, 499
Martensitic transformation
martensitic transformations in sputter-deposited Ti–Ni–Cu shape memory alloy thin films, 364
Metals
simulation of atomic force microscopy image variations due to tip apex size: appearance of half spots, 580
high-resolution electron microscopy of Gd@$C_{82}$ metal fullerenes grown on MgO(001) surfaces, 613
Metastable spin states
metastable spin-states and magnetic anisotropies of thin fcc Fe-layers on Cu(100), 492
Methanol
study of diamond synthesized by simple hot-filament-assisted CVD in various conditions, 285
Molecular beam epitaxy
an atomic force microscopy study of thin copper oxide films grown by molecular beam epitaxy on MgO(100), 57
surface geometry of MBE-grown GaAs(001) surface phases, 556
Molecular beam epitaxy (MBE)
impurity doping during $Pb_{1-x}Sn_xSe/CaF_2$ epitaxial growth, 43
growth of $CeO_2$ thin films by metal–organic molecular beam epitaxy, 60
oxygen adsorption and desorption induced surface phase transition of $SrCuO_2$(001), 120
Molecular dynamics
diamond (111) and (100) surface reconstructions, 256
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
Molecular flux
quantitative estimation of organic molecular beams by using quadrupole mass spectroscopy, 525
Molecular motion
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
Molecular n = beam epitaxy (MBE)
comments on the interdiffusivities evaluated by the decay rate of the satellite peak measured by X-ray diffraction, 124
Molecular orientation
surface structure of a fluorinated thiol on Au(111) by scanning force microscopy, 548
Molybdenum
STM modification of $MoS_2$ in the nanometer-scale using a gas–solid reaction, 588
Molybdenum oxide
physical properties of evaporated molybdenum oxide films, 218
Monolayer
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
Monolayers
heteroepitaxy of KCl on KBr substrate, 39
surface properties of $SiO_x$ monolayer photochemically formed on oxide semiconductors, 404
Multilayers
columnar structures in Fe-based metallic multilayers prepared with the facing-target-type DC sputtering method, 132
influence of deposition parameters on layer structure of Ag/C multilayer zone plates for use in hard X-ray region, 243
boron nitride hard coatings by ion beam and vapor deposition, 327
magnetic structure and magnetoresistance of metallic multilayers, 469
magnetoresistance and magnetic properties of ferromagnetic multilayers, 496
Myristic acid
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594

Nanostructures
negative resistance characteristics and memory phenomena in electro-formed planar metal films, 383
electrochemical nanolithography using scanning probe microscopy: fabrication of patterned metal structures on silicon substrates, 572
simulation of atomic force microscopy image variations due to tip apex size: appearance of half spots, 580
properties of nanophase grains of superconducting YBCO prepared by wet-type jet mill, 584
nanofabrication on n-GaAs surface using a scanning tunnelling microscope in a Ni-salt solution, 606
development of a mesoscale/nanoscale plasma generator, 634
scanning tunnelling microscope-induced oxidation of hydrogen passivated silicon surfaces, 637
Nickel
stress–strain curves of sputtered thin films of Ti–Ni, 337
study on the internal stress in nickel films deposited onto silicon substrates by ion beam and vapor deposition (IVD), 352
Nickel oxide
velocity analysis of ablated particles in pulsed laser deposition of NiO film, 441
transition metal oxide films prepared by pulsed laser deposition for atomic beam detection, 453
Niobium oxide
characterization of niobium oxide electrochromic thin films prepared by reactive d.c. magnetron sputtering, 235
Nitrides
carbon nitride thin films deposited by the reactive ion beam sputtering technique, 289
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305
X-ray absorption and X-ray photoelectron spectroscopic studies of air-oxidized chromium nitride thin films, 314
growth kinetics of thin oxide layers; oxidation of Fe and Fe–N phases at room temperature, 488
Nitrogen
energy-selective electron cyclotron resonance plasma for controlled surface reaction processes, 102
electrical, optical and structural properties of a-SiNGe:H films prepared by the r.f. glow-discharged decomposition, 308
preparation and some properties of nitrogen-mixed ZnO thin films, 445
Nitrogen dioxide
time dependence of current of plasma polymerized polystyrene thin film upon exposure to $NO_2$ gas, 539
Nitrogen implantation
epitaxy of titanium nitride thin films grown by nitrogen implantation, 32
Noble gases
oxidation of Zn films by irradiation with an excited metastable He beam, 460
Nucleation
ultrahigh particle density seeding with nanocrystal diamond particles, 279

Ohmic contact
visible light emission from the porous alloyed Pt/Si contacts, 610

Optical coating
deposition of $SiO_2$ and $Ta_2O_5$ films by electron-beam-excited plasma ion plating, 401
Optical coatings
influence of deposition parameters on layer structure of Ag/C multilayer zone plates for use in hard X-ray region, 243
modelling of lift-off sputter deposition and application to fabrication of a microlens, 246
characteristics of rutile $TiO_2$ films prepared by r.f. magnetron sputtering at a low temperature, 427
Optical properties
the role of neutral oxygen radicals in the oxidation of Ag films, 105
the effects of oxygen content on electrical and optical properties of indium tin oxide films fabricated by reactive sputtering, 206
high-rate deposition of $SiO_2$ by modulated DC reactive sputtering in the transition mode without a feedback system, 213
physical properties of evaporated molybdenum oxide films, 218
$V_{1-x}Mo_xO_2$ thermochromic films deposited by reactive magnetron sputtering, 239
synthesis of β-$FeSi_2$ for optical applications by Fe triple-energy ion implantation into Si(100) and Si(111) substrates, 252
(Cd,Zn)S thin films prepared by chemical bath deposition for photovoltaic devices, 375
changes in surface morphology and optical properties of polymers induced by ion implantation, 529
development of a near-field optical system for investigating thin organic films, 647
Optical spectroscopy
new plasma source with an UHF (500 MHz) antenna, 169
velocity analysis of ablated particles in pulsed laser deposition of NiO film, 441
plasma polymerized acetylene thin film by pulsed discharge, 536
instrumentation of a wafer inspection large sample atomic force microscope, 576
development of a near-field optical system for investigating thin organic films, 647
Optical transient relaxation
study of optical transient relaxation of an Ag–O–Ba thin film, 249
Organic substances
development of a near-field optical system for investigating thin organic films, 647
Organometallic vapour deposition
growth of $CeO_2$ thin films by metal–organic molecular beam epitaxy, 60
Oriented organic molecules
two-dimensionally oriented organic molecules as a substrate for vapor growth of zinc thin films, 521
Oxidation
growth of $CeO_2$ thin films by metal–organic molecular beam epitaxy, 60
initial plasma oxidation kinetics of silicon: DC bias effects, 98
the role of neutral oxygen radicals in the oxidation of Ag films, 105
model for oxidation of TiN in ion-beam-assisted deposition process, 108
electron-beam-induced oxidation of indium particles embedded in a plasma polymer thin film matrix, 112
in-depth concentration profile equation for cations in thin oxide film under the inverse logarithmic growth law of low-temperature oxidation, 117
excited oxygen beam by R.F. type multicapillary ion source, 172
DC reactive sputtering of electro-conductive transparent tin suboxide using a Sn–$O_2$/Ar system, 223
oxidation of TiN, ZrN, TiZrN, CrN, TiCrN and TiN/CrN multilayer hard coatings reactively sputtered at low temperature, 298
X-ray absorption and X-ray photoelectron spectroscopic studies of air-oxidized chromium nitride thin films, 314
oxidation of Zn films by irradiation with an excited metastable He beam, 460
growth kinetics of thin oxide layers; oxidation of Fe and Fe–N phases at room temperature, 488
scanning tunnelling microscope-induced oxidation of hydrogen passivated silicon surfaces, 637
Oxides
oxygen adsorption and desorption induced surface phase transition of $SrCuO_2(001)$, 120
the effects of oxygen content on electrical and optical properties of indium tin oxide films fabricated by reactive sputtering, 206
c-axis-oriented $PbTiO_3$ thin films prepared by sputter-assisted plasma CVD, 457
$Xe^+$-beam sputtered $YBa_2Cu_3O_X$ thin films on Si wafers, 507
Oxides and X-ray photoelectron spectroscopy (XPS)
comments on the interdiffusivities evaluated by the decay rate of the satellite peak measured by X-ray diffraction, 124
Oxygen
excited oxygen beam by R.F. type multicapillary ion source, 172
ozone in reactive gas for producing tin-doped indium oxide films by DC reactive magnetron sputtering, 209
Ozone
ozone in reactive gas for producing tin-doped indium oxide films by DC reactive magnetron sputtering, 209

Palladium
preparation of Pd thin film photo-cathodes using ion-beam sputtering, 393
Partial discharge resistance
improvement of the partial discharge resistance of polymer films by coating with plasma-polymerized films, 533
PEM method
TiN films prepared by unbalanced planar magnetron sputtering under control of photoemission of Ti, 182
Peptide filaments
friction-force microscopy of peptide filament: an application to estimate the size of a supramolecular unit, 624
Percolating films
electron transport in percolating gold films, 368
Phase transitions
phase transitions in ultrathin Al films on Si(111) surfaces, 73
$V_{1-x}Mo_xO_2$ thermochromic films deposited by reactive magnetron sputtering, 239
photoluminescence analysis of CdS thin films under phase transition, 386
the structural characteristics of $VO_x$ films prepared by He-introduced reactive RF unbalanced magnetron sputtering, 436
Photoluminescence
$N_2$-plasma-nitridation effects on porous silicon, 568
visible light emission from the porous alloyed Pt/Si contacts, 610
Physical vapour deposition
highly adhesive TiN thin films prepared on glass by the electron shower method, 311
residual stress and its thermal relaxation in TiN films, 344
micromachine-actuator rotated by rarefied gas effects, 651
Physical vapour deposition (PVD)
velocity analysis of ablated particles in pulsed laser deposition of NiO film, 441
Planarization
a theory on planar magnetron discharge, 190
Plasma emission monitoring
TiN films prepared by unbalanced planar magnetron sputtering under control of photoemission of Ti, 182
Plasma nitridation
$N_2$-plasma-nitridation effects on porous silicon, 568

Plasma-polymerized films
improvement of the partial discharge resistance of polymer films by coating with plasma-polymerized films, 533
Plasma processing and deposition
initial plasma oxidation kinetics of silicon: DC bias effects, 98
energy-selective electron cyclotron resonance plasma for controlled surface reaction processes, 102
remote deposition of scratch resistant films by use of slot antenna microwave plasma source, 143
generation of large-area disk-shaped ECR plasma for diamond deposition, 146
a rectangular large ECR plasma source, 149
sheet-shaped ECR plasma generation using permanent magnets for material processing, 152
plasma-enhanced CVD of TiN and Ti using low-pressure and high-density helicon plasma, 155
new plasma source with an UHF (500 MHz) antenna, 169
excited oxygen beam by R.F. type multicapillary ion source, 172
a theory on planar magnetron discharge, 190
high-rate deposition of $SiO_2$ by modulated DC reactive sputtering in the transition mode without a feedback system, 213
diamond film growth by pulse-modulated magnetoactive microwave plasma chemical vapour deposition, 264
fluorine-containing amorphous hydrogenated carbon films, 294
oxidation of TiN, ZrN, TiZrN, CrN, TiCrN and TiN/CrN multilayer hard coatings reactively sputtered at low temperature, 298
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305
tribological properties of r.f. PACVD amorphous B–N–C coatings, 331
structure of gold-hydrocarbon composite thin films deposited using low-voltage plasma sputtering method, 390
high quality $SiO_2$ depositions from TEOS by ECR plasma, 397
deposition of $SiO_2$ and $Ta_2O_5$ films by electron-beam-excited plasma ion plating, 401
thin Si oxide films for MIS tunnel emitter by hollow cathode enhanced plasma oxidation, 412
tantalum oxide films on silicon grown by tantalum evaporation in atomic oxygen, 415
the structural characteristics of $VO_x$ films prepared by He-introduced reactive RF unbalanced magnetron sputtering, 436
preparation and some properties of nitrogen-mixed ZnO thin films, 445
plasma polymerized acetylene thin film by pulsed discharge, 536
development of a mesoscale/nanoscale plasma generator, 634
Polyimide
improvement of the adhesion to polyimide substrates of copper films prepared by an ion beam and vapor deposition (IVD) method, 356
Polymer
electron-beam-induced oxidation of indium particles embedded in a plasma polymer thin film matrix, 112
Polymer films
improvement of the partial discharge resistance of polymer films by coating with plasma-polymerized films, 533
Polymers
changes in surface morphology and optical properties of polymers induced by ion implantation, 529
Polystyrene film
time dependence of current of plasma polymerized polystyrene thin film upon exposure to $NO_2$ gas, 539
Porous alloyed Pt/Si contact
visible light emission from the porous alloyed Pt/Si contacts, 610
Porous semiconductors
microstructure of spark-processed blue luminescent CdTe, GaSb, and InSb, 552
Porous silicon
$N_2$-plasma-nitridation effects on porous silicon, 568
Quadrupole mass spectroscopy
quantitative estimation of organic molecular beams by using quadrupole mass spectroscopy, 525
Radiation damage
ion implantation in predoped CVD diamond, 271
Reactive sputtering
heteroepitaxial growth of yttria-stabilized zirconia film on oxidized silicon by reactive sputtering, 28
Reflection electron microscopy
in situ reflection electron microscope observation of two-dimensional nucleation on Si(111) during epitaxial growth, 20
Reflection high-energy electron diffraction
an atomic force microscopy study of thin copper oxide films grown by molecular beam epitaxy on MgO(100), 57
Resistivity
physical properties of evaporated molybdenum oxide films, 218
magnetoresistance and magnetic properties of ferromagnetic multilayers, 496
$Xe^+$-beam sputtered $YBa_2Cu_3O_X$ thin films on Si wafers, 507
Rutherford backscattering spectrometry
epitaxy of titanium nitride thin films grown by nitrogen implantation, 32
Rutherford backscattering spectroscopy
the effects of oxygen content on electrical and optical properties of indium tin oxide films fabricated by reactive sputtering, 206
characteristics of rutile $TiO_2$ films prepared by r.f. magnetron sputtering at a low temperature, 427
Scanning force microscopy
friction-force microscopy of peptide filament: an application to estimate the size of a supramolecular unit, 624
Scanning force microscopy (SFM)
surface structure of a fluorinated thiol on Au(111) by scanning force microscopy, 548
Scanning tunnelling microscopy
structural study of epitaxial growth on silicon surfaces, 1
electrochemical nanolithography using scanning probe microscopy: fabrication of patterned metal structures on silicon substrates, 572
STM modification of $MoS_2$ in the nanometer-scale using a gas–solid reaction, 588
reconstruction of heat treated 6H-SiC(0001) surfaces: AES, STM, 591
nanofabrication on n-GaAs surface using a scanning tunnelling microscope in a Ni-salt solution, 606
development of UHV-STM/STS at 2 K, 644
Scanning tunnelling microscopy (STM)
scanning tunnelling microscopy study on dynamic structural formation in mixed fatty-acid monolayers at liquid/graphite interface, 594
initial stage of $C_{60}$ film growth and reaction on Si(111)7×7 and graphite surfaces studied by HREELS–STM, 602
C60 single crystal films on GaAs(001) surfaces, 618
scanning tunnelling microscope-induced oxidation of hydrogen passivated silicon surfaces, 637
nanoscale Al patterning on an STM-manipulated Si surface, 640
Secondary electron emission
preparation of Pd thin film photo-cathodes using ion-beam sputtering, 393
Segregation
chemical state analysis of surface and interface segregates in coevaporated Al–Sn–O systems, 90
Selenium
impurity doping during $Pb_{1-x}Sn_xSe/CaF_2$ epitaxial growth, 43
Self-assembled monolayers
surface structure of a fluorinated thiol on Au(111) by scanning force microscopy, 548

Self assembly
surface structure of a fluorinated thiol on Au(111) by scanning force microscopy, 548
Semiconductors
structural and electrical characterization of $BC_2N$ thin films, 334
Sensors
thermoelectric power of polycrystalline Si films prepared by microwave plasma chemical vapour deposition, 159
c-axis-oriented $PbTiO_3$ thin films prepared by sputter-assisted plasma CVD, 457
selective gas detection by means of surface plasmon resonance sensors, 466
production of a bridge structure using diamond film, 545
Shape memory alloys
martensitic transformations in sputter-deposited Ti–Ni–Cu shape memory alloy thin films, 364
Silicides
thin film silicon compound growth mechanisms: $CrSi_2$/Si(001), 94
synthesis of β-$FeSi_2$ for optical applications by Fe triple-energy ion implantation into Si(100) and Si(111) substrates, 252
Silicon
structural study of epitaxial growth on silicon surfaces, 1
crystalline quality of α-Fe films on Si(111) and Ge(111) substrates grown by direct ion beam deposition, 46
thermodynamic equilibrium and mass transport coupled modelling of the chemical vapour deposition process, 64
phase transitions in ultrathin Al films on Si(111) surfaces, 73
difference of Si nodules precipitating from Al–*X* wt.% Si ($X = 0.5 \sim 3.3$), 84
initial plasma oxidation kinetics of silicon: DC bias effects, 98
thermoelectric power of polycrystalline Si films prepared by microwave plasma chemical vapour deposition, 159
synthesis of β-$FeSi_2$ for optical applications by Fe triple-energy ion implantation into Si(100) and Si(111) substrates, 252
initial stage of $C_{60}$ film growth and reaction on Si(111)7×7 and graphite surfaces studied by HREELS–STM, 602
Silicon nitride
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305
electron energy loss fine structure measurements of silicon nitride films, 318
Silicon oxide
remote deposition of scratch resistant films by use of slot antenna microwave plasma source, 143
high-rate deposition of $SiO_2$ by modulated DC reactive sputtering in the transition mode without a feedback system, 213
modelling of lift-off sputter deposition and application to fabrication of a microlens, 246
electron energy loss fine structure measurements of silicon nitride films, 318
mechanisms of reduction of the internal stress in hydrogenated silicon oxide films prepared by Ar–$H_2$ sputtering, 348
high quality $SiO_2$ depositions from TEOS by ECR plasma, 397
surface properties of $SiO_x$ monolayer photochemically formed on oxide semiconductors, 404
thin Si oxide films for MIS tunnel emitter by hollow cathode enhanced plasma oxidation, 412
new fast atom beam processing with separated masks for fabricating multiple microstructures, 630
Silver
epitaxial growth of silver on an Si(111) $\sqrt{3} \times \sqrt{3}$ Au surface at room temperature, 36
the role of neutral oxygen radicals in the oxidation of Ag films, 105
selective gas detection by means of surface plasmon resonance sensors, 466
Solid phase epitaxial growth
microstructure of germanium films crystallized by high energy ion irradiation, 10
Spark-processed materials
microstructure of spark-processed blue luminescent CdTe, GaSb, and InSb, 552
Spectral selective radiating materials
thin film used to obtain a constant temperature lower than the ambient, 232
Sputtering
Langmuir probe evaluation of ion bombardment during Ti–N growth by unbalanced magnetron sputtering, 52
Monte Carlo simulation of the variation of a binary alloy film composition due to intrinsic resputtering using different working gases, 68
microstructure and preferred orientation in pure titanium films deposited by two-facing-target-type DC sputtering, 128
columnar structures in Fe-based metallic multilayers prepared with the facing-target-type DC sputtering method, 132
large area deposition: Sputtering- and PCVD-systems and techniques for LCD, 136
sheet-shaped ECR plasma generation using permanent magnets for material processing, 152
the enhancement of plasma confining effect at low gas pressure in the sputtering apparatus with floating potential cathode, 162
effects of magnet behind the target on discharge and sputtering characteristics in the sputtering apparatus, 166
transparent, conductive CuI films prepared by rf-dc coupled magnetron sputtering, 179
requirements for sputtering magnetic alloys on organic film, 186
a theory on planar magnetron discharge, 190
large area deposition of ITO films by cluster type sputtering system, 198
crystal growth of ITO films prepared by DC magnetron sputtering on C film, 202
ozone in reactive gas for producing tin-doped indium oxide films by DC reactive magnetron sputtering, 209
high-rate deposition of $SiO_2$ by modulated DC reactive sputtering in the transition mode without a feedback system, 213
DC reactive sputtering of electro-conductive transparent tin suboxide using a Sn–$O_2$/Ar system, 223
$V_{1-x}Mo_xO_2$ thermochromic films deposited by reactive magnetron sputtering, 239
influence of deposition parameters on layer structure of Ag/C multilayer zone plates for use in hard X-ray region, 243
modelling of lift-off sputter deposition and application to fabrication of a microlens, 246
carbon nitride thin films deposited by the reactive ion beam sputtering technique, 289
oxidation of TiN, ZrN, TiZrN, CrN, TiCrN and TiN/CrN multilayer hard coatings reactively sputtered at low temperature, 298
the effects of Tl impurities on the properties of amorphous SiC:H films prepared by co-sputtering, 302
stress–strain curves of sputtered thin films of Ti–Ni, 337
effect of nitrogen gas pressure on residual stress in AlN films deposited by the planar magnetron sputtering system, 340
mechanisms of reduction of the internal stress in hydrogenated silicon oxide films prepared by Ar–$H_2$ sputtering, 348
structure of gold-hydrocarbon composite thin films deposited using low-voltage plasma sputtering method, 390
preparation of Pd thin film photo-cathodes using ion-beam sputtering, 393
investigation of the effects of pumping speed and Ar/$O_2$ ratio on the transient time at mode transition in Ti–$O_2$ reactive sputtering, 423
the structural characteristics of $VO_x$ films prepared by He-introduced reactive RF unbalanced magnetron sputtering, 436

growing $BaTiO_3$ thin films on Si(100) with MgO-buffer layers by sputtering, 449
c-axis-oriented $PbTiO_3$ thin films prepared by sputter-assisted plasma CVD, 457
preparation of $PbTiO_3$ thin films by ion-beam sputtering, 463
magnetic thin films for high-density recording, 474
magnetic and structural properties of Fe films deposited by ion-beam sputtering with a high-energy assisted process, 484
preparation of films of $(Tb,Dy)Fe_2$ giant magnetostrictive alloy by ion beam sputtering process and their characterization, 503
the influence of Bi-sticking coefficient in the growth of Bi(2212) thin film by ion beam sputtering, 510
STM
chemical state analysis of surface and interface segregates in coevaporated Al–Sn–O systems, 90
Stress
microstructure and preferred orientation in pure titanium films deposited by two-facing-target-type DC sputtering, 128
stress–strain curves of sputtered thin films of Ti–Ni, 337
effect of nitrogen gas pressure on residual stress in AlN films deposited by the planar magnetron sputtering system, 340
residual stress and its thermal relaxation in TiN films, 344
mechanisms of reduction of the internal stress in hydrogenated silicon oxide films prepared by $Ar–H_2$ sputtering, 348
Structural properties
improvement in the stability of amorphous SiN–BN films prepared by hybrid-plasma-enhanced chemical vapour deposition, 305
structural and electrical characterization of $BC_2N$ thin films, 334
Styrene gas plasma
time dependence of current of plasma polymerized polystyrene thin film upon exposure to $NO_2$ gas, 539
Superconductivity
$Xe^+$-beam sputtered $YBa_2Cu_3O_X$ thin films on Si wafers, 507
the influence of Bi-sticking coefficient in the growth of Bi(2212) thin film by ion beam sputtering, 510
digital laser etching of Bi–Sr–Ca–Cu–O superconducting thin films, 513
properties of nanophase grains of superconducting YBCO prepared by wet-type jet mill, 584
development of UHV-STM/STS at 2 K, 644
Superlattices
epitaxy of Co/Cu and Cu/Co bilayers on MgO(111), 14
Supramolecular structure
friction-force microscopy of peptide filament: an application to estimate the size of a supramolecular unit, 624
Surface acidity
surface properties of $SiO_x$ monolayer photochemically formed on oxide semiconductors, 404
Surface conductivity
development of UHV-STM/STS at 2 K, 644
Surface defects
instrumentation of a wafer inspection large sample atomic force microscope, 576
Surface geometry
surface geometry of MBE-grown GaAs(001) surface phases, 556
Surface morphology
an atomic force microscopy study of thin copper oxide films grown by molecular beam epitaxy on MgO(100), 57
characterization of niobium oxide electrochromic thin films prepared by reactive d.c. magnetron sputtering, 235
ultrahigh particle density seeding with nanocrystal diamond particles, 279
preparation of Pd thin film photo-cathodes using ion-beam sputtering, 393
characteristics of rutile $TiO_2$ films prepared by r.f. magnetron sputtering at a low temperature, 427
changes in surface morphology and optical properties of polymers induced by ion implantation, 529
new fast atom beam processing with separated masks for fabricating multiple microstructures, 630
Surface plasmons
selective gas detection by means of surface plasmon resonance sensors, 466
Surface reconstruction
reconstruction of heat treated 6H-SiC(0001) surfaces: AES, STM, 591
Surface relaxation and reconstruction
diamond (111) and (100) surface reconstructions, 256
Surface roughness
micromachine-actuator rotated by rarefied gas effects, 651
Surface stress
molecular dynamics simulation of traction fluid molecules under EHL condition, 598
Surface structure
surface structure of single-crystal $CeO_2$ layers grown on Si, 24
ultrathin film of Cu on $\alpha$-$Fe_2O_3$(0001), 76
electron microscopic analysis of chemical-vapour-deposited diamond surface by a novel method, 282
simulation of atomic force microscopy image variations due to tip apex size: appearance of half spots, 580
Surface thermodynamics
micromachine-actuator rotated by rarefied gas effects, 651

Tau protein
friction-force microscopy of peptide filament: an application to estimate the size of a supramolecular unit, 624
Terbium
preparation of films of $(Tb,Dy)Fe_2$ giant magnetostrictive alloy by ion beam sputtering process and their characterization, 503
Thallium
the effects of Tl impurities on the properties of amorphous SiC:H films prepared by co-sputtering, 302
Thin film
study of optical transient relaxation of an Ag–O–Ba thin film, 249
Thin films
ultrathin film of Cu on $\alpha$-$Fe_2O_3$(0001), 76
Tin
impurity doping during $Pb_{1-x}Sn_xSe/CaF_2$ epitaxial growth, 43
chemical state analysis of surface and interface segregates in coevaporated Al–Sn–O systems, 90
TiN films prepared by unbalanced planar magnetron sputtering under control of photoemission of Ti, 182
Ti–Ni–Cu
martensitic transformations in sputter-deposited Ti–Ni–Cu shape memory alloy thin films, 364
Tin oxide
DC reactive sputtering of electro-conductive transparent tin suboxide using a $Sn–O_2/Ar$ system, 223
highly conductive transparent F-doped tin oxide films were prepared by photo-CVD and thermal-CVD, 228
Titanium
microstructure and preferred orientation in pure titanium films deposited by two-facing-target-type DC sputtering, 128
plasma-enhanced CVD of TiN and Ti using low-pressure and high-density helicon plasma, 155
stress–strain curves of sputtered thin films of Ti–Ni, 337
surface morphology of $TiO_x$ films prepared by an ion-beam-assisted reactive deposition method, 431
Titanium dioxide
surface properties of $SiO_x$ monolayer photochemically formed on oxide semiconductors, 404
Titanium nitride
epitaxy of titanium nitride thin films grown by nitrogen implantation, 32

Langmuir probe evaluation of ion bombardment during Ti–N growth by unbalanced magnetron sputtering, 52
model for oxidation of TiN in ion-beam-assisted deposition process, 108
plasma-enhanced CVD of TiN and Ti using low-pressure and high-density helicon plasma, 155
highly adhesive TiN thin films prepared on glass by the electron shower method, 311
residual stress and its thermal relaxation in TiN films, 344
Titanium oxide
characteristics of rutile $TiO_2$ films prepared by r.f. magnetron sputtering at a low temperature, 427
Transmission electron microscopy
thin film growth using a high-current, mass-separated low energy ion beam deposition system, 175
electron microscopic analysis of chemical-vapour-deposited diamond surface by a novel method, 282
investigation of thin-film transistors using a combination of focused ion beam etching and cross-sectional transmission electron microscopy observation, 562
Transmission electron microscopy (TEM)
epitaxy of titanium nitride thin films grown by nitrogen implantation, 32
crystal growth of ITO films prepared by DC magnetron sputtering on C film, 202
Transmission high-energy electron diffraction
thin film silicon compound growth mechanisms: $CrSi_2/Si(001)$, 94
Tribology
boron nitride hard coatings by ion beam and vapor deposition, 327
molecular dynamics simulation of traction fluid molecules under EHL condition, 598
Tungsten
structure and growth features of tungsten clusters deposited on MgO(001) surfaces, 5
Tunneling
thin Si oxide films for MIS tunnel emitter by hollow cathode enhanced plasma oxidation, 412
Tunnelling
negative resistance characteristics and memory phenomena in electro-formed planar metal films, 383
Two-dimensional nucleation
in situ reflection electron microscope observation of two-dimensional nucleation on Si(111) during epitaxial growth, 20

Ultrafine particle
study of optical transient relaxation of an Ag–O–Ba thin film, 249
Unbalanced planar magnetron
TiN films prepared by unbalanced planar magnetron sputtering under control of photoemission of Ti, 182

Vacancies
in-depth concentration profile equation for cations in thin oxide film under the inverse logarithmic growth law of low-temperature oxidation, 117
photoluminescence analysis of CdS thin films under phase transition, 386
Vanadium oxide
$V_{1-x}Mo_xO_2$ thermochromic films deposited by reactive magnetron sputtering, 239
the structural characteristics of $VO_x$ films prepared by He-introduced reactive RF unbalanced magnetron sputtering, 436
Vapour growth
two-dimensionally oriented organic molecules as a substrate for vapor growth of zinc thin films, 521
Visible light emission
visible light emission from the porous alloyed Pt/Si contacts, 610

Water
instrumentation of a wafer inspection large sample atomic force microscope, 576

XPS
chemical state analysis of surface and interface segregates in coevaporated Al–Sn–O systems, 90
X-ray absorption
X-ray absorption and X-ray photoelectron spectroscopic studies of air-oxidized chromium nitride thin films, 314
X-ray diffraction
in situ observation of the in-plane structure of C60 thin films on metal substrates prepared by molecular beam deposition, 80
microstructure and preferred orientation in pure titanium films deposited by two-facing-target-type DC sputtering, 128
effect of bias voltage on AlN thin films prepared by electron shower method, 321
effect of nitrogen gas pressure on residual stress in AlN films deposited by the planar magnetron sputtering system, 340
residual stress and its thermal relaxation in TiN films, 344
growth of MnSb and $Mn_2Sb$ epitaxial layers on GaAs substrates by hot-wall epitaxy, 499
direct observation of the crystallization in EL organic thin films by total reflection X-ray diffractometer, 542
X-Ray photoelectron spectroscopy
energy-selective electron cyclotron resonance plasma for controlled surface reaction processes, 102
transparent, conductive CuI films prepared by rf-dc coupled magnetron sputtering, 179
highly adhesive TiN thin films prepared on glass by the electron shower method, 311
X-ray absorption and X-ray photoelectron spectroscopic studies of air-oxidized chromium nitride thin films, 314
structural and electrical characterization of $BC_2N$ thin films, 334
X-ray photoelectron spectroscopy (XPS)
oxygen adsorption and desorption induced surface phase transition of $SrCuO_2(001)$, 120
fluorine-containing amorphous hydrogenated carbon films, 294
effect of bias voltage on AlN thin films prepared by electron shower method, 321
growth and characterization of $Ta_2O_5$ thin films on Si by ion beam sputter deposition, 419

Yttria-stabilized zirconia
heteroepitaxial growth of yttria-stabilized zirconia film on oxidized silicon by reactive sputtering, 28
Yttrium
properties of nanophase grains of superconducting YBCO prepared by wet-type jet mill, 584

Zinc
two-dimensionally oriented organic molecules as a substrate for vapor growth of zinc thin films, 521
Zinc oxide
preparation and some properties of nitrogen-mixed ZnO thin films, 445
oxidation of Zn films by irradiation with an excited metastable He beam, 460